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STRATEGIC IMPORTANCE OF
DICHLORODIFLUOROMETHANE (FREON 12) TO THE SOVIET BLOC

A. STATEMENT OF PROBLEM

Freon 12 is currently under consideration by committees in the EDAC-ACEP structure for downgrading from U.S. List IA. No agreements in COCOM have as yet been finalized with respect to treatment of Freon 12 at the IL-I level. The outcome of the downgrading considerations will determine whether negotiations will be opened on an IL-II (quota) basis. OSD desires that prior to the adoption of a firm interagency position relative to negotiating instructions to U.S. Delegate, [REDACTED] all current, pertinent departmental intelligence be made available for consideration and review in connection with the final summarization of the OSD position. 25X1C8a

B. FACTS BEARING UPON THE PROBLEM

1. Uses of Freon 12

- a. As a refrigerant - where careful control of low temperatures is required and a non-toxic, non-explosive, non-corrosive refrigerant is required.
- b. As a leak detector in apparatus requiring precision sealing.

2. Soviet Bloc Supply Position

Estimates of total Soviet Bloc production and known imports of Freon 12 into the Bloc indicate a total availability of 1,110 tons for the year 1952, which is only about 10% of the amount consumed by U.S. and NATO Military Services in 1952.

The manufacturing of Freon 12 requires large quantities of corrosive resistant equipment, and many very highly skilled technicians. Both the machinery and the technicians are in critically short supply in the Soviet Bloc. Evidence of these shortages has been noted in numerous reports concerning attempts of the Soviet Bloc to increase the production of Freon 12. Further evidence of the critical shortage is seen in reports of frantic efforts to procure small amounts, at great expense through clandestine channels. These efforts include smuggling and bleeding of refrigeration systems of Soviet and other ships so that they might be refilled with Freon 12 at foreign bunkering stations.

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The use of substitutes by the Soviet military forces in their equipment, at a sacrifice of efficiency, indicates that the shortage of Freon 12 is impairing the Soviet war capabilities. Communist war production authorities assign high priorities to Freon 12 and permit none for non-military uses.

3. U.S. Military Uses

a. Direct Consumption by U.S. Services: Total 4310 tons

	<u>Tons</u>
Rocket and guided missile programs	575
Equipment and ammunition testing	190
Ammunition loading	80
Leak detecting of precision electronics equipment	180
Air conditioning of arsenals and special laboratories	475
Propellants for poison gas, disinfectants, and fire extinguishers	320
Research and development testing of equipment under simulated arctic conditions	265
Submarine air conditioning	85
Tank air conditioning	155
Refrigerated condensers on destroyers, cruisers and aircraft carriers	107
Wind Tunnels - NACA - Research and Air Development research	363
Aerosol insecticide sprays	1020
Other miscellaneous uses except refrigeration of food	515

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b. Food preservation in ships, portable field units, specialized equipment, etc. (includes only the specialized types of equipment in which Freon 12 is absolutely essential): 1580 Tons

c. NATO Countries Military Requirements (it may be assumed that the use pattern is similar to the U.S. Military): 1785 Tons

d. Military Production Contracts (The U.S. Military Services procured 3,800 tons of Freon 12 for use in the production of cold rubber for tank treads, combat tires, special gun packings, special electrical insulation, and the processing of blood plasma and antibiotics in military type field packages and other special medical packing.): 3800 Tons

C. SUMMARY

1. Uses

Freon 12 has a wide range of direct military uses.

2. Bloc Shortage

There is a critical shortage of Freon 12 and a critical shortage in the bloc both of the technicians and machinery required for the manufacture of Freon 12.

3. Shipments

a. Shipments of Freon 12 to the Soviet bloc would contribute to the war potential of the USSR and the satellites.

b. Shipments to the Soviet bloc would contribute directly and immediately to the current military build-up of the USSR and the satellites.

D. CONCLUSION

The foregoing facts and reasoning lead to the OSD recommendation that Freon 12 be retained on U.S. List IA.

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